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ABSTRACT

The scenarios project set out to develop a tool to improve understanding of vocational education and training (VET) systems in the linked contexts of economic and technological change; changes in society, work, and the labor market; and changing training/skills environment. Other key attempts at the European level to generate European scenarios were five scenarios that were the work of the "cellule prospective" and four scenarios developed in preparation for the French presidency of the European Union. Phase 1 of the project consisted of design of a questionnaire, its completion in a survey of 200-300 experts in each of 10 participating countries, and analysis of results. It established provisional scenarios and identified strategies for further examination. Phase 2 combined further analysis of Phase 1 results and trends, followed by a predominantly qualitative approach to exploring intersections between a range of scenarios and a set of strategies. Project findings indicated 4 areas may provide a focus for the next 10 years: the social dimension of VET and lifelong learning; public and private partnerships; compatible national and European structures of educational and VET qualifications and provision and promotion of European standards; and modernization of work. These three major scenarios were identified at the European level: Europe on the edge, protective and incremental Europe, and sustainable and competitive Europe. (Contains 21 references) (YLB)

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Scenarios and strategies for vocational education and lifelong learning in Europe

Summary of findings and conclusions of the joint Cedefop/ETF project (1998 - 2002)

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European Centre for the Development
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Scenarios and Strategies
for VET and LLL in Europe

European Training Foundation

Scenarios and strategies for vocational education and lifelong learning in Europe

Summary of findings and conclusions of the joint Cedefop/ETF project (1998 - 2002)

Burkart Sellin

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Europe 123
GR-570 01 Thessaloniki (Pylea)

Postal Address:
PO Box 22427
GR-551 02 Thessaloniki

Tel. (30) 310 490 111
Fax (30) 310 490 020
E-mail: info@cedefop.eu.int
Homepage: www.cedefop.eu.int
Interactive website: www.trainingvillage.gr

Burkart Sellin

Project partners:

Austria:	IBE – Universität Linz	Luxembourg/ Belgium:	Etudes et Formation – Luxembourg
Czech Republic:	VUOS – Praha		
Estonia:	Technical University –Tallinn	Poland:	BKKK – Warszawa
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Max Goote Expert Center
Amsterdam University
(Scientific & technical coordination)

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Stavros Stavrou, Deputy Director

'When we look to the future we confront many uncertainties about the world our children, grandchildren, and great grandchildren will live in. But we can be certain of at least one thing: if we want this earth to provide for the needs of its inhabitants, human society must undergo a transformation. The world of tomorrow must be fundamentally different from the world we know as we step into the 21st century and the new millennium. We must strive to build a 'sustainable future'. Democracy, equity, social justice, peace and harmony with our natural environment should be the watchwords of this world to come. We must make sure we place the notion of 'durability' at the base of our way of living, of governing our nations and communities, of interacting on a global scale.

Education, in the broadest sense of the term, plays a preponderant role in this development aimed at fundamental changes in our ways of living and behaving. Education is the 'force for the future' because it is one of the most powerful instruments of change. One of the greatest problems we face is how to adjust our way of thinking to meet the challenge of an increasingly complex, rapidly changing, unpredictable world. We must rethink our way of organising knowledge. This means breaking down the traditional barriers between disciplines and conceiving new ways to reconnect that which has been torn apart. We have to redesign our educational policies and programs. And, as we put these reforms into effect, we have to keep our sights on the long term and honour our tremendous responsibility for future generations.'

Frederico Mayor, Director General of Unesco ([1])

([1]) Unesco 1999, EDP-99/WS/3, *Les sept savoirs nécessaires à l'éducation du futur*, 63 pp. (the quotation is from the preface)

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The Scenarios and Strategies for Lifelong Learning project was launched as an initiative of Cedefop. Its Network for Research Cooperation on European Trends in Occupations and Qualifications (Ciretoq) discussed the approach and feasibility and advised Cedefop on how to conceptualise and such a survey. The Max Goote Expert Centre at Amsterdam University and in particular its Director, Fons van Wieringen, brought a deep understanding of scenario projects in the field of education and training; his staff -(Helga Dekker and Ghislaine Schmitt - made valuable contributions. Together they animated, encouraged and assessed the partner institutes' research, ensured comparability and compatibility of the results and provided the necessary scientific coordination. The teams from the ten participating institutes, despite their differing backgrounds in education and training, language and culture, made the necessary adjustments to understand each other, and worked effectively together as a team.

The stakeholders, experts and policy makers who actively participated in the surveys' questionnaires, interviews, seminars and conferences made valuable comments and suggestions for improvement. Without their participation we would have been unable to complete this complex project successfully. Finally we want to express our thanks to everyone who contributed behind the scenes- the professional assistants , those who assisted in the English editing of reports, and in the design of the reports. A special mention should be given here to Tom Leney from the Institute of Education at the Unversity of London for his support in putting things in a proper (and understandable) English. He assisted the author in the final revision of this text.

Stavros Stavrou, Deputy Director/Cedefop,

Ulrich Hillenkamp, Deputy Director/ ETF

Burkart Sellin and Manfred Tessaring, Project Coordinators/Cedefop

Anastasia Fetsi and Peter Grootings, Project Coordiators/ETF

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1. Introduction

This Cedefop/ETF research project has developed the scenarios methodology and applied it to the fields of vocational training and lifelong learning. The distinctiveness of the approach to scenario building that we have adopted lies in the attempt to link the development of scenarios integrally to the process of strategy formation. The project has worked at both country and European levels.

The idea at the core of the research is that the discussion of a range of plausible scenarios for the next decade is likely to help researchers, policy makers and others with an interest in education and training policies to identify strategies that can meet current and future challenges effectively.

Projecting current trends into the future frequently produces contradictory or divergent results. Strategy development for education and training systems often involves a considerable degree of uncertainty about the future, particularly in the context of unprecedented global, economic, social and technological change. The scenarios method works within the grain of this uncertainty. It can be applied at local, national, European and international levels.

The method that we have developed aims to help policy makers, researchers and others to 'think outside the box' of short-term decision making in order to focus on medium and longer term strategy development. Current policy-making and practice in vocational education and training – not least continuing training – is often ad hoc and concentrates on short-term solutions. Used effectively, and at different decision-making levels, the scenarios methodology can help modern organisations to achieve a proactive and sustainable approach to strategy formation.

The scenarios project sponsored by Cedefop and ETF has involved a partnership between ten countries of the EU and central and eastern Europe, co-ordinated by the Max Goote Expert Centre in Amsterdam. The project set out to develop a tool to improve our understanding of vocational education and training systems in the linked contexts of economic and technological change, changes in society, work and the labour market, and the changing training/skills environment.

First we developed a range of plausible scenarios for a time ten years hence. The scenarios are grounded in an analysis of trends and uncertainties. Then, through a series of interviews with experts, we attempted to give an indication of strategies that would, or could, be linked to the development of the different scenarios.

The project has placed emphasis on both the process and the outcomes of the scenarios method. Building scenarios for vocational education and training is not intended as a tool for predicting the future. Rather, the purpose is to call attention to some strategically important factors for the shaping of training and lifelong learning, whether at national or European decision-making level. So, in this project, we have set out both to develop scenarios as a

methodology and to apply the method to the fields of vocational education and training and lifelong learning.

This report sets our findings in a broader context. We hope that it will contribute to the task of developing relevant policy for VET and lifelong learning.

2. The scenarios method: potential and limitations

In this section we draw attention to the potential and limitations of the scenario method in comparison with other tools for anticipating the future and shaping strategies. In particular, we consider benchmarking and the use of indicators, the Delphi method and forecasting. We also make reference to possible areas of application of the scenarios method.

2.1. Advantages and areas of application of the method

The alternative scenarios and strategies articulated through the use of the method developed in the project are a potential basis for making workable medium and long-term decisions.

Scenarios are a set of plausible and challenging alternative pictures of how the future may unfold in key respects over a given timescale. Building scenarios helps to clarify complex relationships within a relatively simple framework, encouraging stakeholders to reflect on the consequences of their routine activities and to define or evaluate relevant day-to-day decisions in a medium or longer-term perspective. This 'strategic conversation' demands teamwork, and calls for the involvement of a wide range of engaged policy players. Results can be achieved despite players' divergent interests and conflicting positions, such as may exist for example between employees' and employers' interests.

The benchmarking method, by comparison, identifies criteria and targets for evaluating the outcomes of current policies. Benchmarking is used, for example, to evaluate the outcomes of EU employment strategy. Benchmarking can identify trends and outcomes, but gives only the current picture. It aims to define parameters assisting conclusions on the outcomes of specific actions or policies, on the basis of a number of indicators. The two methods of analysis may use both qualitative and quantitative factors.

Scenarios are strategic situations or games that focus attention beyond short-term power plays or winning daily 'battles'. The aim is to develop workable medium and long-term concepts and define appropriate action. As far as we know, this project marks the first time that the method has been applied in such depth and breadth to education or training, although the method has been practised since the mid-1980s in a number of international organisations and commercial settings.

Scenario building is comparable in some respects with the Delphi method, which has developed over the same time. The Delphi method also uses multiple interviews with experts to determine options for future development. This method, however, mainly aims to find short-term solutions for options already on the agenda. The scenario approach, by contrast, has proved its worth as a method that can help to generate discussion and build consensus over aims, objectives and methods. The process is one that mediates between theory and practice, research and application. For some years it has also been used to improve our

understanding of trends and the uncertainties that lie ahead in international, global and European contexts ([2]).

The beginnings of the scenario method can be traced back to the American futurologist H. Kahn in the 1960s. New methods were explored that would represent an alternative to traditional methods of forecasting within the social sciences. The scenario method proved particular useful as an instrument of medium and long-term strategic business planning.

Strategic instruments such as the scenario method were in particular demand from large oil companies, like Shell, after the shock of adjustment following the oil crisis in the 1970s. Traditional methods of planning hinged on the notions of stability over time. The assumption was that in decision making, certain marginal conditions remained constant, i.e. that the course of development of a certain factor regarded as marginal remains constant. Based on this starting-point, certain important variables for business planning could now be forecast (e.g. expected sales and demand for a product).

All theoretical and practical scenario approaches offer alternative 'drafts' of the future that can help to guide action and decision making processes in a limited or particular field. In other words:

'A scenario denotes a description of the future development of a particular object of prognosis under alternative marginal conditions.' ([3])

A further essential feature of a scenario is that the aim is not to produce correct prognoses but to influence decision makers and others involved in such way that they become aware of the different implications of certain possible developments. Thus, they can react more flexibly. Scenario planning is sometimes described not as a scientific method but as a practical tool that aids decision making when future circumstances are uncertain. As a tool it also opens up strategies that help shape the future. The method's main priority is not a precise forecast of developments and data for specific variables, but rather the creation or sharpening of different ideas to guide actions shaping the future within a particular field.

Recent literature stresses the usefulness of the results and, even more important, the benefits of designing scenarios and the assessment of action strategies. These collaborative design

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([2]) *Cf.* for example the OECD international futures programme or the programme 'schooling for tomorrow': see IFP homepage at www.oecd.org, also Bertrand, Gilles *et al*: Europe 2010: *cinq scénarios pour sortir du no future*, in *futuribles, analyse et prospective*, November 1999, No 246, p. 5 *ff.* or the work of the '*cellule prospective*' at the forward studies unit of the President of the EU Commission, which we will cover in more detail later. See also the article by van Wieringen, Fons: *Strategies and scenarios for the development of (continuing) VET*, in Cedefop (Sellin, Burkart) 1999: *European trends in the development of occupations and qualifications, findings of research, studies and analysis for policy and practice*, Volume II, *pp.* 331, DE and FR versions - see list of publications available as PDF files at www.etv.gr. The institute of the Joint Research Centre of the European Commission, the Institute for Prospective Technological Studies, IPTS, located in Seville, also uses the scenario method to analyse trends, see www.jrc.es

([3]) Hanssmann, *K.-W.(1983).* Kurzlehrbuch Prognoseverfahren. *Wiesbaden* , pp. 11

processes enable members of an organisation to develop common ideas about goals, or at least to find a language that makes it possible to communicate about possible problem areas and conflicts of interest. Scenario planning is – to use contemporary terminology – a contribution to the creation, or maintenance of a 'learning organisation ' ([4]).

As a rule, scenarios building proceeds as follows. At first the different contexts that impact on the area in question are outlined, then combined in a variety of ways allowing scenarios to be worked out for the subject area. The spectrum of methods used for this purpose can range from literature and data reviews or search through qualitative interviews and group seminars to the application of large-scale quantitative survey strategies. The research methods selected may be applied in a single-step approach or within a framework of iterative, multiple-step survey techniques including feedback to expert participants such as common within the Delphi-method.

With the help of these scenarios, strategies and action alternatives can then be examined and described in more concrete terms.

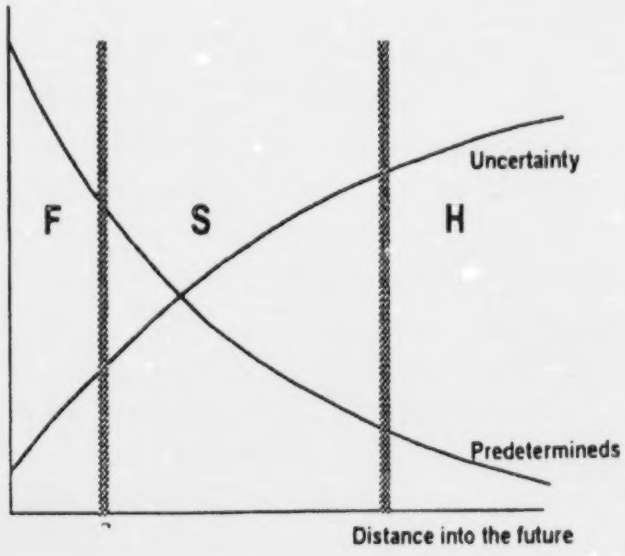
The diagram that follows gives a clearer picture of forecasting and scenario building, setting both relatively sure and uncertain factorsagainst a timescale.

According to van der Heijden ([5]) scenario planning is optimally positioned precisely where the number of possible uncertainties with respect to a particular planning exercise coincides with the number of predictable quantities (point S in the diagram). For shorter planning periods traditional forecast methods will be most effective (F= Forecast) and for longer periods – as van der Heijden remarks – there is only hope (H).

([4]) See: (1) Heijden, Kees van der, *et al.* (1996). *Scenarios. The art of strategic conversation*. Chichester, New York, Brisbane, John Wiley and Sons; (2) Heiijden, Kees van der (1997). *Scenarios, Strategies and Strategy Process*. Breukelen , Nijenrode University Press, Nijenrode Research Papers Series - Centre for Organisational Learning and Change; No 1997-01; (3) Schoemaker, Paul J.(1995). *Scenario planning: a tool for strategic thinking*. In: *Sloan management Review*, 1995. Jg. , H. Winter, pp. 25-40.

([5]) van der Heijden (1996) op. cit.

Figure 1: Different periods and suitable planning methods (from van der Heijden 1996)



Although the scenarios method is useful for promoting and monitoring dialogue between different managers, experts and practitioners, its value as a practical aid to policy formation has sometimes been difficult to establish. For this reason the Cedefop/ETF project has concentrated on the interface between scenarios and potentially viable strategies. One of our conclusions is that more work needs to be done to establish methods that the policy community can use to form links between different plausible futures (the scenarios) and strategies that could or should be applied. The following questions provide a way forward in this respect. Which strategies are 'robust' across the different scenarios? Which groups of strategies are likely to apply differentially to the respective scenarios, if and as they develop? Who and what are the drivers of change?

As a rule the effectiveness of the scenarios method depends strongly on a moderator or coach capable of bringing together the different stakeholders. This may involve different disciplines, cultures or countries. It requires players and participants to invest time in development; this is something that policy-makers and decision-makers do not have in abundance. VET, continuing training and lifelong learning are polyvalent, interdisciplinary and inter-cultural worlds, especially where questions of European or international cooperation are involved. The scenario method allows us to collate and organise a number of factors and variables in a controlled way. This is particularly important for international comparison and pro-active analysis where the scenario method has strong potential.

2.2. The usefulness of scenarios

We can summarise the usefulness of the scenario method as contributing to the following:

(a) developing strategies or investigating alternatives systematically against the background of coherently constructed stories or images of the future that contain both the most important trends and key areas of uncertainty. Then, making a justifiable selection of particular actions and measures for policy-making and practice;

(b) reducing the complexity of a multi-faceted future, which appears contradictory and uncertain and is unpredictable;

(c) providing an impartial platform for debates that are controversial and characterised by clashes of interest. This provides the opportunity to integrate, or at least approximate, polar positions, leading to pragmatic decisions that are pro-active and focus on the medium and long term ([6]);

(d) integrating statistical data from quantitative surveys and factor analyses with information gained from qualitative surveys and expert interviews.

The method is likely to be applicable in several circumstances. First when a system is caught up in short-term or reactive change and key players have difficulty in developing longer-term parameters and strategies. Second, where particular problems need to be solved, but it is uncertain how the future may unroll. Third, where organisations view scenario building as one facet of developing and reviewing policy formation, and want to incorporate the 'strategic conversation' into the culture of the learning organisation. Fourth, scenario building can be a training tool that enables people to see the bigger picture.

The data used to build scenarios and to interrogate potential strategies is usually based on expert opinion as well as observed trends. This should not be confused with a representative opinion poll. Tapping into the views of a range of experts gives the method its degree of credibility and plausibility. Scenario building has more affinity with applied science and action research than with pure research, and should have a close connection with political and policy practice. This can make academics suspicious of the methodology.

In summary, the scenario method can help those involved in policy and research to cooperate. In times when short-termism and reactive policy measures dominate, decisions of questionable validity and permanence are frequently taken in isolation and on an ad-hoc basis. These decisions are then criticised for their arbitrariness and lack of transparency. Furthermore, lifelong learning policies are still characterised by a lack of clarity of definition, purpose and application. This, together with calls for sustainability and pro-active policy formation, gives rise to a growing need for instruments or tools to clarify the complexity and to create a stronger degree of continuity, however abstract this may sometimes be. Scenario

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([6]) Interestingly, these terms are on everybody's lips precisely in times of increasing arbitrariness and the dominance of short-termism (especially in the international and global debate).

building and developing the 'strategic conversation' can help decision makers labouring under immediate pressures to focus on medium and longer-term strategies. Decision-making becomes more transparent, helping to integrate the main stakeholders - perhaps non-governmental bodies and social partners – into the process of identifying, forming and implementing purposeful strategies for change.

3. Scenarios on the future of Europe

Before presenting the methodology and findings of the Cedefop/ETF project, it is worth documenting the outcomes of other key attempts at European level to generate European scenarios. In 1999 the European Commission constructed broad scenarios for the development of Europe. In the same year a research agency developed a series of social scenarios for Europe, in preparation for the French presidency of the EU. Both these sets of scenarios relied on less extensive surveys and a simpler method of construction than the Cedefop/ETF project that developed scenarios and strategies for VET and lifelong learning. However, the importance of both of these other exercises in scenario building lies in their proximity to decision makers at European level. This forms a useful basis for comparison with our results and also helps in the translation of our ten-country research from the national to the European level.

3.1. The work of *cellule prospective* ([7]): five scenarios for the development of Europe

The work on scenarios of the *cellule prospective* began during latter stages of Jacques Delors' leadership of the European Commission. The purpose of the endeavour was to arrive at scenarios that would provide a series of coherent and plausible images of how Europe may have developed towards the end of the first decade of the new century, seen from the perspective of 2010.

Several defining criteria were chosen as starting points for the work ([8]) of building up each scenario: the development of institutions and governance; social cohesion; economic adaptability; EU-enlargement and the international context. The group bundled together a number of variables relating to potential scenarios and allocated them to various topics. After a series of interviews, decision-makers from the Commission and other EU institutions were brought together in workshops to develop alternative scenarios. They finally arrived at five scenarios, which they considered to sum up the spectrum of possibilities, factors and players that could play a crucial role in shaping future developments. Each of these scenarios is allocated a name and given a corresponding image. We summarise these below ([9]).

([7]) This 'forward studies unit' attached to the office of the President of the Commission was set up by Commission President Jacques Delors, on scenarios see: Bertrand, G. et al (1999). *Europe 2010 ... op.cit.*

([8]) *ibid.* p. 11

([9]) Author's translation from the French, Bertrand, G. *et al, ibid. pp.* 5 and 6

3.1.1. Scenario 1: the triumph of the market

The scenario is characterised, as its name implies, by the dominance of economic liberalism and the free exchange of goods and services. Europe, whatever values and standards it seeks to achieve, is hardly different from the rest of the world, which is dominated by the tough mechanisms of a single global market.

3.1.2. Scenario 2: a hundred flowers bloom

The scenario a decade hence is typified by growing paralysis (and, probably, corruption) of the major public and private institutions. Europeans withdraw in social terms to the local and micro level, and to a primarily informal economy entailing a duplication of initiatives, with no logical connection.

3.1.3. Scenario 3: divided responsibilities

Against a background of positive economic development a metamorphosis of the public sector takes place, and these factors engender policies that regenerate and renew the social and industrial fabrics.

3.1.4. Scenario 4: the developing society

This scenario depicts a society undergoing extensive transformation in respect of socio-economic and political developments. This time the prevailing drive is for economic, social and environmental sustainability: ecological and human development values prevail. A basically workable new form of humanism emerges, and this paves the way for an 'immaterial and global renaissance'.

3.1.5. Scenario 5: the turbulent neighbourhood

Europe weakens economically and politically, and this occurs in a context of sudden and turbulent geo-political developments, both in the East and in the South. Growing tensions and conflicts cause a European Security Council to be almost entirely concerned with questions of security and defence.

These scenarios show the extent of uncertainty about future developments, even on a relatively short timescale. They show that the search for a vision for Europe, its institutions, its identity and geo-political settlement is uncertain, continuing, and contested. Just as enlargement is not yet complete, so also the search for underlying values to achieve a broad consensus and to define the socio-economic direction which Europe could take in the next 10 years is still relatively open.

The scenarios generated by the *cellule prospective* suggest that further stabilisation of Europe with a maximum guarantee of economic and social prosperity cannot, at present, be taken for granted.

3.2. Employment, individuals and social protection: four scenarios for a 'social Europe' ([10])

In preparation for the French presidency of the European Union in 2000, an expert working group ([11]) based on one of France's *grandes écoles* ([12]) developed four interesting scenarios focusing on employment and social security and, therefore, on important aspects of European socio-economic development. The working group comprised civil servants, consultants, researchers and representatives of employers' organisations and the trade unions. The experts took the view that, for some time, the economic and monetary policies of Europe had been developing without much reference to the social dimension of Europe. Therefore, the task of the workshops was to develop scenarios in relation to a 'social Europe', to assist policy formation during the French presidency of the EU in the second half of 2000 and beyond.

The workshops focused on the following questions. How can social solidarity be achieved in the new environment of economic and monetary union? What new models for industrial relations ([13]) may appear? What may be the future role of markets in the individual Member States and in the EU? What part will the social partners play on a national and perhaps European scale?

The group built up the scenarios to reflect the following uncertainties:

(a) whether or not national social systems would continue to develop in relative isolation from one another;

(b) whether or not the systems of industrial (occupational) relations would converge;

(c) whether or not national social security systems would be complemented in future by, for instance, a specific European benefits system.

([10]) *Commissariat Général du Plan, La Documentation Française*, Paris, November 1999: *Emploi, négociations collectives, protection sociale: vers quelle Europe sociale? Rapport du Groupe présidé par Joël Maurice*, 215 *pp.*; see also www.plan.gouv.fr/publications/maurice

([11]) Set up by the '*Commissariat général du plan*' in connection with preliminary considerations on reforming the European institutions prior to the intergovernmental conference in Nice, which took place as planned in autumn 2000. Since this brought no significant progress in these central questions on the future identity and development of Europe, a new intergovernmental conference was set for 2004.

([12]) The scenario building was led by the research centre for socio-economic analyses at the Technical College of Road and Bridge Construction. The *grandes écoles*' are France's elite higher education institutes that educate 'technical elites' and management personnel for other sectors, especially the French administration and state enterprises. '

([13]) The original speaks of '*rélations professionnelles*', i.e. occupational relations, *Communiqué* '*Emploi, négociations collectives* ...' in www.plan.gouv.fr/presse/cp 15.12.99.html

The workshop discussions with high-ranking researchers, civil servants and decision-makers resulted in the matrix summarised below, showing four potential scenarios for a 'social Europe'.

The four scenarios for a social Europe hinge, first, on whether social solidarity remains different country by country and, second, on whether industrial relations and social systems converge. The French group call the four resulting scenarios: *Fragmented social Europe; Competing social Europe; A Europe united despite its differences;* and, an *Integrated social Europe*. The working group concluded by offering its opinion. It preferred, as the model to which policy formation should aspire, Scenario C: A Europe united despite its differences. The scenarios are illustrated in the matrix that follows.

The French Government's scenarios for a 'social Europe' ([14])

SOCIAL EUROPE		Type of industrial (occupational) relations	
		Various models retained (status quo)	Convergence in the sense of harmonisation (convergence of systems)
Social solidarity or cohesion ([15])	Remains essentially different in each country (status quo)	Scenario A: *Fragmented social Europe*	Scenario B: *Competing social Europe*
	Develops an additional common dimension (stronger social cohesion)	Scenario C: *A Europe united despite its differences*	Scenario D: *Integrated social Europe*

3.3. The Cedefop/ETF scenarios for VET and lifelong learning

The two sets of European scenarios that we have just described have proved to be helpful in providing a useful comparator for evaluating the results of the Cedefop/ETF project and taking them a step further. Our scenarios set training into economic, social and labour market contexts – in this sense we have developed 'meta-scenarios' for training and lifelong learning. Nevertheless, we have taken care to build country by country scenarios in a way that takes full account of the national cultures, systems and trajectories of the ten participating countries, and which emphasise the environments that impact strongly on learning and training. However, the scenarios and the appropriate strategies vary from country to country. We have extrapolated European-level scenarios from these national variations. We will finally compare and further construct the European level scenarios that we have arrived at with the Commission's broader scenarios for European development and with the social Europe scenarios. This also enables us to place our scenarios for VET and lifelong learning into the broader context of general policy-making and the construction of Europe.

([14]) *Communiqué ... op. cit.*

([15]) The comments in brackets are the authors', but are based on explanations in the publication quoted

It was not, however, the prime objective of the Cedefop/ETF project to produce broad scenarios for the development of Europe. We focused on training and lifelong learning in the contexts of the global and local economy and technological change, the changing labour market and organisation of work, and wider demographic and social change. From the start, our aim was to link the different scenarios that we would develop to appropriate strategies, with a view to formulating practical recommendations for strategies and action. While we pay close attention to factors such as macro-economic development, the labour market and the changing organisation of the workplace, our scenarios focus closely on identifying and meeting training needs in the longer term. This takes us into the field of lifelong learning.

To contribute to the current political and professional debate on (new) objectives for education and training policies, we have examined whether, in the light of predictable trends and uncertainties, researchers and decision-makers can agree on the range of scenarios that are plausible for 2010. The country scenarios for training that the research developed in the second phase of the project appeared, to the experts we interviewed, to be consistent and challenging in the national context. On this basis we have been able to construct provisional scenarios for training at European level, using both a qualitative and a quantitative approach. Below, we report on these scenarios in more detail. In the second phase we have also been successful in beginning to identify the strategies that will be applicable - singly or in combinations - dependent on which scenario prevails in the national context. We have conceptualised how to make the link at European level between scenarios and strategies. This report will conclude with a proposal on taking this further step at the European level. At the European level our methods and results begin to fill an important gap: an exploration of how European policy circles may better formulate VET and lifelong learning policies in the light of a range of potential and plausible future European scenarios.

4. Work programme

The sections of the report that follow describe in more detail the method developed and the outcomes of the research across the two phases of the project.

The first phase of the project consisted of drawing up a questionnaire, its completion in a survey of some 200 to 300 experts in each of the ten participating countries ([16]), and the analysis of the results. This phase established provisional scenarios and identified strategies for further examination. The second phase combined further analysis of the results of phase one and trends, followed by a predominantly qualitative approach to exploring the intersections between a range of scenarios and a set of strategies. Data for the second phase depended on in-depth interviews with experts in all the participating countries.

The steps that the country-based researchers took to establish and interrogate the scenarios are outlined in the table below. The work was undertaken under the leadership of Cedefop and ETF ([17]);the Max Goote Expert Centre of Amsterdam University provided the technical and scientific co-ordination.

Table 1: Steps in developing the scenarios and strategies

1	Define the scope and the key questions.
2	Identify the major stakeholders.
3	Identify basic trends.
4	Identify basic strategy elements.
5	Identifying key uncertainties, driving forces.
6	Classify the main developments according to importance and uncertainty. Aim is to find the two major developments that are the most important as well as most uncertain.
7	Construct initial scenario themes and matrices.
8	Develop scenarios. General themes emerge from the simple scenarios and from checking them. Although the trends appear in all the scenarios, they can be given more or less weight or attention in different scenarios. At this stage not all scenarios need to be fleshed out.
9	Check for consistency and plausibility.
10	Are there trends compatible within the chosen time frame?
11	Do the scenarios combine outcomes of uncertainties that indeed go together?

([16]) Participating countries: Austria, Belgium/Luxembourg, Germany, Greece, United Kingdom (EU Member States) and Czech Republic, Estonia, Hungary, Poland and Slovenia (candidates for accession to the EU)

([17]) Cedefop: European Centre for the Development of Vocational Training, Thessaloniki, see: www.cedefop.eu.int and/or www.etv.gr, particularly under *Scenarios and Strategies ...*; ETF: European Training Foundation/Turin, see: www.etf.eu.int, long version published by the Max Goote Kenniscentrum (for Vocational Training and Adult Education at the University of Amsterdam), cf. Sellin, Burkart, Fons van Wieringen, et al. (2000): *Scenarios and strategies for vocational education and training in Europe*, European synthesis report on phase I, Max Goote Rapport, Thessaloniki, Turin, Amsterdam, 197 *pp.*

12	Are the major stakeholders placed in positions they do not like and can change?
13	Evolve toward scenarios and robust strategies.
14	Retrace the previous steps and see if the scenarios and strategies address the real issues facing the national VET-system.
15	Are the scenarios relevant enough to have impact? The scenarios should connect directly with the mental maps and concerns of the users.
16	Are the scenarios internally consistent and perceived as such?
17	Are the scenarios archetypal? They should describe generally different futures rather than variations on one theme.
18	Do the scenarios describe an equilibrium, or a state in which the system might exist for some length of time?
19	Test robustness of strategies in different scenarios.
20	Strategic conversation. To develop these scenarios and strategies a strategic conversation should have taken place. 'It is the general conversational process by which people influence each other, the decision taking and the longer term pattern in institutional action and behaviour'. The national seminars were partly set up to serve this purpose.
21	Institutionalisation. 'Ultimately the most effective way to ensure institutional effectiveness of the scenario process is for management to make the scenarios part of the ongoing formal decision making process'. The scenarios have to become part of the system for discussing strategic questions.

Phase 1 began towards the end of 1998, lasting until early 2000. At the first project meeting in Amsterdam we agreed on aims and working methods and prepared and subsequently conducted a postal survey of experts, using the questionnaires referred to above. Approximately 200 printed questionnaires (each containing three separate parts) were distributed in all the participating countries. The questionnaires contained questions about trends and potential strategies in three contexts with close links to training: the economy and technology; society and the labour market; and, education and training. The survey covered 20 possible trends for each context and a range of potential strategies([18]). The completed survey was analysed using statistical techniques, mainly factor analysis. The researchers then prepared country reports containing preliminary scenarios. A European report was drawn up to bring the country results together. National seminars were held for groups of decision-makers and researchers to discuss and verify the plausibility and workability of the findings and to take the analysis further in preparation for phase 2. A first European conference was held in Athens (with the support of the Greek Labour Administration, OAED) in January 2000 for the international evaluation of the first phase. The European and country reports were

([18]) *Cf.* questionnaire and list of the trends in the final report on Phase I at www. trainingvillage.gr or www.Cedefop.eu.int

published, and the most important findings summarised as a synopsis. These formed the basis for phase 2 ([19]).

Phase 2 began in April 2000 with a research seminar in Brussels including a contribution from each country team. The decision was taken to place emphasis on the analytical work of developing meta-scenarios for training in each participating country, and to rely on a series of qualitative interviews with experts in the field to generate data in this phase. Work then went ahead in each country to build up and refine a more unified set of scenarios (the meta-scenarios for training) through further analysis of the outcomes of phase 1, a close analysis of national trends and a first series of expert interviews. The particular emphasis of phase 2 was to be on strategies, the drivers of change and the activity needed for the design and implementation of appropriate strategies.

The research partners built up the country specific scenarios and began a series of interviews to explore the intersections between the country scenarios and the identified strategies. A second working meeting of the participating institutes took place in Thessaloniki in January 2001. This allowed for discussion of the findings to date from the country studies and preparation for the national seminars, as well as preparation for the final European report and the final conference. The national seminars explored the plausibility of the scenarios and the links that the researchers had been able to establish between the scenarios and identified strategies. Once the country reports had been completed and the draft of the European report was ready, the final working meeting was held in June 2001 in Brussels. This also provided the opportunity to consider draft documents prepared by the project coordinators at Cedefop and ETF and to prepare in some detail for the second European conference. The possibility of a guide for practitioners who may want to use the scenario methodology in their own context was also discussed, as a specific follow up to the project; as was the idea of using the emerging European scenarios for training and lifelong learning to interrogate strategies at the European policy level.

The national and European reports were duly completed. All are published on Cedefop's website. The final conference was held in Tallinn, Estonia in October 2001.

([19]) see www.cedefop.eu.int and www.trainingvillage.gr; the German report on phase 1 was published by the *Institut für Technik und Bildung (ITB)* of Bremen University

5. Phase 1: Summary of findings

5.1. Main outcomes

The first European conference, organised by Cedefop and ETF as a final stage of phase 1, was held in Athens in January 2000. The European report on phase 1 was presented, examined critically, and largely approved. The view was expressed that more evidence on each country's socio-economic and statistical context would help to make sense for both the national reports and the European level analysis. These details have been added subsequently, and Eurostat's updated statistics also used to assist comparison between EU-countries and CEE-countries ([20]).

The national surveys of expert opinion in phase 1 gave the analysts at the Max Goote Expert Centre in Amsterdam access to the views and opinions contained in some 2500 sets of responses from VET experts, policy makers and stakeholders from the participating five EU Member States and five accession states from central and eastern Europe ([21]). Factor analysis of the detailed questionnaire results gave a reliable insight into experts' views concerning important trends and uncertainties in vocational education and training and the linked contexts over a ten-year time period, and indicated possible strategies for the next ten years. Researchers were able to construct a provisional series of scenarios for each context and to highlight a number of strategies for further consideration. The paragraphs below summarise the main outcomes of phase 1 at the European level.

We distinguished between three 'contextual environments' for training. Context A was 'the economy and technology'. Context B was 'employment and the labour market'. Context C was 'training, skills and knowledge'. A number of specific trends and strategies in each of these categories were given the highest values by experts in all the participating countries especially in respect of two dimensions: their importance and relevance; and their likelihood of occurring.

Four sets of provisional scenarios were proposed, based on these factors. The outcome resulted in one set of scenarios each for contexts A and B and two sets of scenarios for context C (see also below section 5.2).

Respondents emphasised the need to establish new forms of economic and work organisation in response to accelerating globalisation, and the development of new forms of public/private cooperation are seen as crucially important in the economic sphere in order to improve competitiveness. Promoting changes in the organisation of work and increasing flexibility and mobility among the workforce are seen as priority requirements. This necessitates creating flexibility in vocational training courses, a change in the frame of reference of VET providers,

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([20]) See Eurostat, focus series, 2001

([21]) The questionnaire was in three parts. Mostly, experts were sent and asked to complete one section only.

greater acceptance of the social dimension as a frame of reference for VET policies, and an increasing individualisation and decentralisation of VET programmes.

Respondents identified numerous strategies for training as associated with these developments. Of these, a number of strategies were identified as having a potential role to play in all the countries participating in the research, although the application of each strategy may vary by country and the importance may vary by scenario.

Training strategies by context

Context	Associated VET strategies
Economy and technology	Improve incentives for all players to become involved in vocational education and training Anticipate the particular needs of specific target groups, regions, sectors and enterprises, SMEs([22]) Promote the establishment of learning organisations, regions and knowledge management
Labour market and organisation of work	Establish a 'modern workforce' and 'modern' employment practices Establish supporting structures and special measures for high-risk groups
Training, skills and knowledge	Improve the transparency of qualifications structures (national and European) ([23]) Encourage both geographical and occupational mobility Promote personal development of individuals and groups, and individual responsibility for training Combat social marginalisation Encourage basic and transferable skills acquisition Meet the needs of older employees and job-seekers Persuade individuals and enterprises to invest more in training

([22]) SMEs: small and medium-sized enterprises with up to 200 employees

([23]) *Cf.* Cedefop studies into trends in occupational and qualifications development and the tools and instruments for predicting the development of qualifications at Cedefop.eu.int (publications). A three-volume publication on trends in qualifications structures in some EU Member States: France, Germany, Spain, Netherlands and England/Wales is due to appear soon. The OECD launched a working group on the development of qualifications structures in connection with LLL in spring 2001

5.2. The scenarios for the three environments

The scenarios produced in the first phase of the project formed an important point of reference for phase 2. At this earlier stage we elaborated separate sets of scenarios for each of the contexts referred to above.

For the economic and technological context, the scenarios hinge first on the extent to which new networks and partnerships between private and public organisations may have developed by 2010, and then the extent to which economic restructuring takes place to increase competitiveness. This produced four scenarios:

(a) scenario 1: stagnation;

(b) scenario 2: good will but no results;

(c) scenario 3: short term development;

(d) scenario 4: comprehensive development.

These four scenarios are illustrated in the matrix which follows.

Matrix 1: Scenarios in context A, 'economy and technology'

Partnership between public and private agencies // Economic restructuring to increase competitiveness	Few partnerships/ little cooperation	Many partnerships/much cooperation between public and private agencies (of economic and technological development)
Little modernisation	1. *Stagnation* Economic development is uncertain, little interaction with initial and continuing training	2. *Good will but few results* In this scenario no strong economic impetus prevails, although numerous links with training providers exist
Comprehensive modernisation	3. *Short-term development* Modernisation and restructuring of enterprises takes place without significant links to education and training	4. *Comprehensive development* The economy is thoroughly modernised and there is a high level of interaction between education/training and enterprises

The employment scenarios are based on the extent to which 'modernisation' of the workforce occurs and the extent of mobility of labour. This produced the following scenarios:

(a) scenario 1: immobility;

(b) scenario 2: organisational change;

(c) scenario 3: flexible worker and inflexible work organisation;

(d) scenario 4: synergy (between capital and labour).

These four scenarios are illustrated below.

Matrix 2: Four scenarios in context B, 'employment and the labour market'

Modernisation/Flexibility of labour, the workplace and organisation of work // Workforce mobility (occupational and geographical)	Little modernisation or flexibility of labour	High degree of flexibility and restructuring of labour
Little mobility or flexibility	1. *Immobility* Enterprises cling to traditional structures, and staff are not interested in change or innovation	2. *Organisational change* The organisation of labour changes while the workforce clings to old practices
High degree of mobility/flexibility among the workforce	3. *Flexible workers, inflexible organisation of labour* In this case employees are prepared to think in new dimensions and forms of labour, but enterprises show little innovation in their internal organisation.	4. *Synergy between labour and capital* Here there is agreement on the need for restructuring labour and its organisation and the need for the workforce to adapt: both pull together.

Two separate matrices were needed for the training, skills and knowledge environment because the four highly rated variables were considered almost equally important.

Matrix 3a consisted of scenarios that vary according to the demand/ lack of demand for employees with social and transferable skills, and the extent of innovation among training providers.

(d) scenario 1: traditional inward looking system;

(e) Scenario 2: clash between supply and demand;

(f) Scenario 3: unproductive innovation;

(g) Scenario 4: demand keeps pace with education and training innovation.

The first set of scenarios for education, training and knowledge are illustrated in the matrix below.

Matrix 3a: Four scenarios in context C, 'training, skills and knowledge (I)'

Demand for social and general/transferable qualifications and competences // innovative and adaptable external and group training providers	Little demand for social and general competences in connection with in-company training	Strong demand and involvement of enterprises
Little willingness to adapt/innovate on the part of training providers	1. *Traditional inward-looking system* No great need for social and generic qualifications; providers uphold their usual courses and content	2. *Clash between supply and demand* The demand for social and generic competences is great but is not being satisfied
Vocational education/training providers centres well prepared	3 *Unproductive innovation* Education providers renew their programmes but there is no commensurate demand	4. *Demand keeps pace with the innovative capacity of education provision* Decentralisation of the supply structure and growing demand for new kinds of qualification are commensurate

The second set of scenarios (matrix 3b) consists of scenarios where the key uncertainties are identified as the extent to which individuals take responsibility for their own training and the extent to which training is seen as having social goals, particularly as concerns groups at risk of exclusion or marginalisation, such as young job seekers or ageing people in the labour market:

(h) scenario 1: fragmentation;

(i) scenario 2: collective responsibility;

(j) scenario 3: neo-liberal approach to training and skills;

(k) scenario 4: joint responsibility.

Matrix 3b: Four scenarios in context C, 'training, skills and knowledge (II)'

Social cushioning of certain target groups //individual responsibility	Vocational training policies not viewed as social policies	Vocational training is used extensively for the integration or reintegration of vulnerable target groups
Little individual responsibility for vocational training	1. *Fragmentation* Hardly anyone feels really responsible for vocational training	2. *Predominantly collective responsibility* Traditional state-based 'social democratic' training predominates
Vocational training is primarily the responsibility of the individual	3. *Neo-liberal approach* The market and the purchasing power of the individual or the economy dominate	4. *Responsibility lies jointly with the individual and public or social partners* Vocational training provision as a public responsibility and individual initiative coincide

5.3. Evaluation of the main findings of phase 1

We found that:

(a) assessment of the importance of basic trends and the likelihood of their occurrence do not differ greatly between the participating countries, in spite of differences in detail;

(b) as expected, several significant differences exist between the participating EU and accession countries, but these are not so marked that the two groups need to be treated separately. In other words, the central and eastern European countries differ as much among themselves as they do from the EU countries, and the latter also demonstrate diverse structures;

(c) it is clear that the pressure for action and reform in central and eastern European countries is greater than in EU countries, which do not have to implement such a systemic transformation.

As concerns mobility, freedom of movement and migration, European standards and qualification trends, it is noticeable that the central and eastern European countries do not wish to see their newly acquired freedom of movement jeopardised. However, they increasingly fear that the emigration of highly-qualified and skilled workers will continue, and this may delay the necessary modernisation or transformation of their own economy and society. Many worry about a brain-drain to the West. ([24])

Central and eastern European countries' perceptions of the EU have become much more critical and sober, but their willingness to think in terms of European (i.e. EU) standards and qualification structures seems to be significantly greater than in the participating EU Member States themselves.

The scenarios produced in phase 1 were regarded as provisional. An important task in the second phase was to re-examine the scenarios, key trends, uncertainties and potentially useful strategies. Each required clearer definition and development. Furthermore, the concerns and trajectories of individual countries would need to be given more consideration. Finally, the researchers hoped to devote more attention to the actions and measures appropriate to particular strategies in phase 2.

At the end of the first phase of the project, we observed that several key shifts of emphasis currently taking place in all the participating countries, irrespective of their location in the EU, central and eastern Europe:

([24]) It seems, however, that the main flow of migration and brain-drain has already taken place since the opening of frontiers in the early 1990's; the date of enlargement or of a formal opening of frontiers between the EU and CEE-countries after access will not provide dramatic or sudden change. Quite a few other factors play a role.

(a) economic renewal is increasingly seen as a matter of putting people, employees, the acquisition of new skills and competences at centre stage;

(b) modern forms of human resource management and organisation in workplaces are a prerequisite for developing and using people's skills and full potential;

(c) the need to think in terms of processes and networks is replacing older habits e.g. traditional hierarchies and status pyramids;

(d) to be effective, sectoral and local systems need to operate with a large degree of autonomy;

(e) focus is increasingly on the individual's (self-) learning and a decentralisation of learning opportunities; however, systems are not yet well defined or developed neither in the public nor private domains.

The researchers and stakeholders who participated in the seminars and the European conference, that brought phase 1 of the project to its conclusion, clearly thought that the scenarios method can contribute to implementing these priorities, and to the identification of effective strategies and actions in the context of a world defined by uncertainties as much as certainties.

6. Phase 2: Building up national and European scenarios

The focus of phase 2 was on strategy formation. The teams developed a single set of plausible, coherent and challenging scenarios for training in each of the countries involved in the research, and at European level. This made it possible for the researchers, after a series of interviews with a range of key players in the field, to explore the interface between the country scenarios and a pre-defined series of strategies. At European level we have been able to construct the building blocks to link strategy formation to the development of scenarios. Carrying this task further would entail more work and the involvement of key players at the European level.

In this section we outline the scenarios developed at country level and then explore the European level scenarios that we have been able to construct for training and lifelong learning.

Section 6 will set out the strategies that we have worked with. Here, our purpose is primarily to suggest how these strategies could be formulated in order to explore their robustness and relevance for the different training scenarios that may develop at European level. The reader is asked to note that the applicability of each strategy or group of strategies is explored in more detail in the nine country reports and the full version of the final European report.

Section 7 summarises the main conclusions of the project. The section links the outcomes of the project to the debate that is developing in Europe concerning competitiveness, employment, education, training and lifelong learning, and refers to the outcomes of the final conference held in Tallinn, Estonia in October 2001.

Section 8 makes a proposal for carrying out a formative scenarios and strategies analysis for training and lifelong learning at the European level.

6.1. Key steps in developing the European scenarios for training

We used a five-step procedure to construct the European scenarios for training. It should be noted that we concentrated much of the work in phase 2 at national level, which provided the refined material for developing the European scenarios within phase 2.

First, the research teams selected relevant scenario dimensions on the basis of the outcomes of phase 1. This step identified two dimensions for each context, and the coordinators of the research were able to establish a series of provisional scenarios for each context at European level.

In step 2, the research teams used these provisional European scenarios in the participating countries to develop provisional scenarios for the three different contexts in their particular national situations.

After this, the teams identified a series of unified 'meta-scenarios' for training in each participating country. These were then brought together at the European level to identify and select common criteria that could be used in the participating countries in order to improve the respective provisional scenarios.

Next, we improved the scenarios in each of the nine participating countries, and this delivered a total of 27 scenarios that could be more readily compared. These scenarios reflect the national contexts but, because they have been constructed using common criteria, they also lend themselves to the construction of more refined European or comparative scenarios for training.

The final step was to analyse the possibilities for clustering the 27 scenarios into meaningful scenarios at the European level. Towards the end of this section we set out the project's European scenarios for training and lifelong learning. We believe that these are soundly based on the trends and uncertainties about the future identified and explored by the project. The European scenarios will still require some development and further refinement, and this can only be done in discussion with the European players. This represents the final step of the project, which was launched by Cedefop and the Max Goote Expert Centre at the beginning of 2002; its outcome will be documented separately.

The raw material for building up the European scenarios consisted of all the statements within the total of 27 country scenarios developed in the participating countries in the EU and in central and eastern Europe. The table that follows lists the titles of final scenarios developed on a country by country basis in step 4. In practice, each scenario covered specific criteria relating to the three separate contexts: economic and technological development; social, labour market and workplace change; and the demand for training and learning. Readers will find full information on the Cedefop website ([25]). In table 1 we give a list of the revised and improved scenarios of the countries in phase 2.

([25]) www.trainingvillage.gr

Table 2: Phase 2 scenarios for training, 2010 in the participating states ([26])

Participating country	Scenarios identified (titles)
Czech Republic	Scepticism to change
	Growth-solidarity
	Growth-competitiveness
United Kingdom	Crisis looms and the big players step in
	Ad hoc responses to global pressures
	The free market approach to competitiveness on course
	A social partnership approach to competitiveness develops
Belgium/ Luxembourg	Controlled globalisation
	Regulation
	Proximity of training
Slovenia	Economic and social crisis
	Slow and steady (controlled) growth
	Economic growth and flexibility
Estonia	Good start
	Splitting into two
	Dissolving
Austria	Internationalisation
	Harmonisation
	Regionalisation
Greece	Complete domination of the market and increased inequalities on multiple levels
	Individual and selective responses to the effects of globalisation
	Competitive economic policy, lifelong learning policy and/or new dimensions in social policy
Poland	Limited development/ad hoc adjustments
	Growth, Cooperation and competition
Germany	From the dual to a plural system of vocational education
	Work process related and occupation-specific vocational education
	Revalorization of formal education and lifelong learning

6.2. Identifying European scenarios for training

The project co-ordinators clustered the 27 country-based scenarios into groups. This was done at the Max Goote Centre in Amsterdam on the basis of two processes, one qualitative and the other quantitative. The first clustering attempted to identify common elements in the scenarios, distinguishing three European clusters or scenarios that group common elements

([26]) See basic document

identified at national level. The second procedure was intended as a check on the more substantive first clustering. We achieved this by placing the scores of the 27 scenarios in the economic and social dimensions on a graph.

The resulting in three clusters are as follows.

6.2.1. Cluster 1: Europe in fragments (or *Europe balancing on the edge*)

The common elements are:

(a) economic downturns or recession;

(b) low competitiveness in global terms;

(c) low growth;

(d) pronounced social inequalities;

(e) traditional practices prevail in companies;

(f) unemployment remains a problem;

(g) a brain drain;

(h) high mobility and migration of labour;

(i) government regulates market;

(j) trade unions are social partners;

(k) inclusion is priority;

(l) VET remains inflexible;

(m) ICT deepens social and training inequalities;

(n) calls for public support for groups at risk of social exclusion;

(o) uncertainty about how to approach policies for lifelong learning;

(p) weakly developed in-company training systems.

6.2.2. Cluster 2: Europe of the individuals (or Protective and incremental Europe)

The common elements in this cluster are:

(a) markets prevail;

(b) some periods of high growth;

(c) the state withdraws and undertakes minimum intervention;

(d) continuing privatisation;

(e) small businesses have difficulties;

(f) liberalisation and deregulation of traditional frameworks;

(g) unemployment remains a problem;

(h) social inequalities increase;

(i) the state takes little or no responsibility for lifelong learning;

(j) individual training accounts/vouchers;

(k) individuals invest in own training;

(l) training programs are tailor made;

(m) companies only offer limited training, and little financing.

6.2.3. Cluster 3: Europe of the networks (or *Europe ready for sustainable change*)

The common elements for this cluster are:

(a) stable, steady intermediate growth;

(b) problems remain with achieving competitiveness;

(c) programmes of privatisation are complete;

(d) process of industrial restructuring has gone a long way;

(e) networks between firms, learning organisations are common;

(f) reduced/low unemployment;

(g) there is a need for a mobile workforce;

(h) high mobility; high flexibility;

(i) all kinds of work (training, working, non-working, part-time, zero-hours contracts etc) coexist; lifelong learning is important;

(j) well developed in-company training forms part of business plans;

(k) increased social inequalities – state and social partners are called on to tackle this;

(l) on the job training; tele-working, national and international cooperation are part of the training set-up;

(m) individuals need to invest (financial and decision making) in their own VET.

6.2.4. Quantitative analysis

We checked these outcomes using the quantitative data that the national teams provided. This also resulted in three clusters. Though similar, the clusters were not identical to those summarised above. We can identify the second set of clusters as:

(a) Europe balancing on the edge;

(b) protective and incremental Europe;

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(c) Europe ready for sustainable change.

Europe in fragments and *Europe balancing on the edge* are similar. *Europe of the individuals* and *Protective and incremental Europe* have considerable overlap. But the linkage between *Europe of the networks* and *Europe ready for sustainable change is looser*.

It is clear that the scenarios still require some further adjustment and refinement. Nevertheless, the project has succeeded in developing three scenarios for training at European level.

7. Phase 2: linking scenarios to strategy formation

The national teams began their interviews and analysis with a common set of strategies to which they could add particular strategies that might be appropriate in the national setting. They were able to investigate how appropriate to one or another of the scenarios a particular strategy was likely to be, and which strategies would most likely be robust in the national setting across a number of scenarios. We also wanted to find out what kinds of measures different strategies would involve, and who would be the main drivers, designers and implementers of change.

7.1. Clustering the strategies

This way of working produced interesting results in each country, and enabled the research teams to cluster together groups of associated strategies. Estonia, for example, identified clusters of strategies geared to 'developing a new VET infrastructure; supplying all parties with information; establishing pathways through education and training to the labour market; and, enabling flexible, mobile and lifelong learning employees.' The UK team identified four clusters – groups of strategies to develop modernisation, information, protection and social development. These and other teams were able to demonstrate how the clusters of strategies would apply differently, dependent on the scenario or scenario combination that actually occurred over the next ten years. The outcomes varied by country.

However, although the strength of these national clusters of strategies lies in the way that they help to map out alternative country-specific futures, it is difficult in several instances to compare one set of results with another.

In order to arrive at a platform to examine strategies at European level, and not just national level, we regrouped the strategies into four categories each containing two groups of strategies. We based these categories on a mixed state/market model in which the state or government co-ordinates the market. The relative influence of the state (or intervention) and the market will vary from scenario to scenario. The government – perhaps with the social partners or, conceivably, some other agency - may play a key role in the coordination of the market, or it may withdraw towards the sidelines. Demand and supply must be in proportion in this 'market' situation – again, the balance may vary, as may the drivers of equilibrium and change in different scenarios. In any case, information is a necessary minimum condition and a market cannot exist by itself.

Each of the identified strategies may intersect with the scenarios in different ways at European level. We redefined the clusters of strategies relating specifically to training and lifelong learning as follows.

(d) demand - this consists of strategies that are intended:

  (i) to develop the 'modern worker';

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(ii) to make individuals responsible for their own training financially and in terms of ownership;

(e) supply:

(i) to develop flexible providers and networks of providers;

(ii) to establish more training within firms and develop learning organisations;

(f) information:

(i) to improve forecasting and anticipate future needs more effectively;

(ii) to establish transparency and the usefulness of qualifications and pathways, and ensure access for all;

(g) coordination (market coordination by governments and other agencies):

(i) to monitor and provide quality control;

(ii) to protect particular groups, and achieve social inclusion.

The country strategies and clusters could all be classified within this frameworkthough the strategies were not evenly spread across the categories. This implies that more work needs to be done to improve the clusters of strategies for training identified in the country reports, particularly if lifelong learning is to be taken fully into account. We can conclude that the framework outlined above would form a sounder basis than any of the country-based clustering of strategies for exploration of the intersection between strategies and scenarios at European level.

7.2. Robustness of the identified strategies

Each project team worked out the robustness of their strategies through the lens of the country scenarios. By robustness, we simply mean the extent to which a particular strategy or cluster of strategies appears to be applicable and effective across the range of scenarios. Since each country explored somewhat differing strategies and grouped them differently, it is difficult to reach general conclusions about their robustness.

One way to compare the robustness of the strategies is to recluster them using the framework we have just described, then look at the robustness of the new clusters. Doing this allowed us to assess the robustness of each cluster of strategies as a whole. This is shown in the table below. The robustness can vary between a value of 1, indicating a strategy with no robustness across scenarios, and 3, which would indicate maximum robustness.

Table 3: Overall measure of robustness of the identified strategies

Cluster of strategies		Robustness
Demand	Developing the 'modern' worker	1,77
	Encouraging individuals to take responsible for their own training	2,00
Supply	Developing flexible providers/networks of providers	1,88
	Learning organisations: setting up more training within firms/ strategy	2,00
Information	Forecasting and anticipating needs	2,33
	Transparency of qualifications and pathways/availability	2,40
Coordination	Monitoring	1,50
	Protection and social inclusion	2,15

The table shows that strategies relating to providing information and forecasting are the most robust strategies along with those concerning the development of widely accessible, transparent and fit-for-purpose learning packages, qualifications and pathways. This is consistent with the outcome of the country-by-country reports. The protection strategy is also robust. The least robust cluster of strategies is the monitoring strategy. It has a score of 1,50. Surprisingly, perhaps, the modern worker strategy also scores quite low, with a score of 1,77.

Some strategies will be robust across the different scenarios. Others will play a particularly important role in driving towards one scenario rather than another. This analysis merits further development at European level.

8. The Future for training and lifelong learning in Europe: what can the scenarios method contribute?

8.1. The European debate under way

In December 2000, the heads of EU-governments and states approved a declaration on the future of the European Union, calling for, a fundamental and wide-ranging debate on the future of Europe. The European Commission has proposed a number of procedures for the debate on the future of the European Union. It has proposed that an open exchange of views on the future of Europe should accompany the current debate on the reform of the competences and institutions of the EU ([27]). This should also assist preparations for the further Inter-governmental Conference planned for 2004 and the preceding European convention.

In its recent communication on this issue, the Commission focuses on three main questions:

(a) how can the participation of citizens and all interested parties be promoted effectively?

(b) how can the partners in Europe ensure that transnational, transregional and intersectoral debates enrich one another?

(c) how can national and specific sectoral debates be integrated with the European debate, and how can they find their full place in the forthcoming institutional reform? ([28])

Education, VET, and lifelong learning form an important part of this debate. They are identified as topics of vital importance at every level. That this is clearly the case is best shown by referring to the EU Presidency's priorities for the second half of 2001. The main priority was to intensify the debate on the future of Europe and its identity. Attention is concentrated here on the forthcoming enlargement of the European Union and the questions concerning governance of a wider Europe. Of five other priorities listed, three directly implicate education and vocational training strategies. These are:

(a) improving the quality of work, promoting equal opportunities, combating exclusion and poverty;

(b) promoting lasting economic growth and a Community economic policy;

(c) promoting sustainable development and the quality of life.

([27]) governance

([28]) To be prepared in view of the convent and the following governmental conference envisaged for 2004 which ought to define more precisely the competencies of the different actors and levels in all fields

More specifically, quantitative and qualitative employment indicators and other quality control indicators are currently being applied to evaluate national action plans and programmes for employment. A special emphasis is on the social dimension, with particular attention devoted to promoting the European social model. This entails the modernisation of social security systems, the sustainable financing of pensions, etc..

An identified goal is that living standards and the quality of life in the EU must continually be safeguarded and improved. A European strategy for sustainable development, which was largely agreed by the European Council in Gothenburg in June 2001, aims to ensure that economic development better serves the interests of individual and collective humanity. Three aspects are defined as having equal importance: economic growth, social cohesion and environmental protection. Precise objectives and more specific indicators ought, however, to be established for these areas.

At the special meeting in Lisbon in March 2000, the heads of state and government agreed 'a new strategic goal in order to strengthen employment, economic reform and social cohesion'. They further agreed to work energetically with a view to:

(h) preparing the transition to a competitive, dynamic and knowledge-based economy;

(i) modernising the European social model by investing in people and building an active welfare state. ([29])

To achieve these aims it was agreed to establish 'a more coherent and systematic approach' to 'implementing a new open method of coordination' and to 'mobilising the necessary means'. Here, the Council places strong emphasis on the role of public-private partnerships and the social dialogue between employees' and employers' unions in renewing more traditional areas of the State's activity.

During its Lisbon meeting, the European Council also asked the Education Council to submit a report about 'the concrete future objectives of education and training systems'. The Education Council has presented its report, which in turn defines three main objectives ([30]). These are:

(a) to increase the quality and effectiveness of education and training systems;

(b) to facilitate the access of all to the education and training systems; and

(c) to open up education and training systems to the wider world.

([29]) See *Presidency Conclusions, Lisbon European Council, 23 and 24 March 2000* and Presidency note on 'Employment, economic reforms and social cohesion, towards a Europe based on innovation and knowledge' (5256/00 + Addi COR 1 (en)).

([30]) See: Report from the Education Council to the European Council *The concrete future objectives of education and training systems* 5688/01 EDUC 20 and the report of the Commission with the same title (COM (2001) 59 final).

The outcome of the joint Cedefop/ETF scenario surveys and the current policy objectives of the European Union are thus largely compatible.

8.2. Supporting the further development of European VET- and lifelong learning policies

The scenarios project can assist the Commission and the Council in their endeavours to further define and develop strategies, indicators and benchmarks for education, training and lifelong learning and to contribute to the achievement of concrete objectives on a 10-year timeframe. The scenarios approach can help to identify more clearly the drivers for innovation and the most appropriate actors and measures, once the wider policy objectives for education and training policies have been agreed upon. The Education Council's report on the concrete objectives for education and training quoted above is an important step in defining such wider policy objectives.

In addition, the scenario project has the potential to contribute to an in-depth discussion about the kinds and levels of intervention that are most likely to implement such strategies. As this report has shown, the scenarios method can effectively develop an on-going 'strategic conversation' that brings into constructive dialogue the relevant stakeholders, social partners and competent bodies, at local, regional, sectoral, national, and/or European level.

Major strategies to be explored through the lens of different scenarios for Europe could include the following:

(a) strengthening of the social (and environmental) dimension of VET and lifelong learning as against the economic and competitiveness dimension. This places emphasis on combating polarisation and marginalisation, and ensuring equality of access to training and learning opportunities. It implies measures to open up the highest possible level of qualifications for all and forms of positive discrimination in favour of disadvantaged groups, regions and sectors ([31]);

(b) development of the institutions responsible for VET and lifelong learning. This will include cooperation between state authorities, enterprises, schools, etc., promoting partnerships between public and private educational institutions and between schools, the workplace and other settings for learning, at national, regional and sectoral levels;

(c) provision of a transparent structure of educational and VET qualifications and of adequate certification and accreditation systems at sectoral, national and European levels. This will mean creating a connection between qualifications obtained in initial and continuing training, and facilitating a common framework for different education

([31]) See the preamble to the Amsterdam Treaty, which refers to the promotion of the highest levels of competences of all the citizens of Europe.

and (continuing) training paths, and their content. Promotion of European standards in the development of qualifications and in certification/accreditation will be feasible in certain sectors. Continuing cooperation is needed in the promotion of innovations, tools and methods for adjusting VET and continuing training provision and qualifications;

(d) (re)organisation and modernisation of work, accompanied by improvements in the quality of work and life. This implies improved integration of learning hours and working hours, facilitating time for education and recognition of experiential/informal learning. It may call for increased involvement of the social partners, promotion of flexible wage agreements and forms of working (e.g. job rotation) appropriate to the differing requirements and living and working conditions of employees and the self-employed or liberal professions, thus making it possible to combine work and learning throughout one's whole working life. This may also include modernisation and decentralisation, individualisation and increased flexibility of options and supply structures, accompanied by a strengthening of the 'market' position of participants in VET and lifelong learning. One way of combining improvements in the quality of work and quality of life may be through new types of collective agreements and working time/learning time combinations.

Thus, it appears that four areas will provide the focus during the next 10 years. These are:

(a) the social (and environmental) dimension of vocational training and lifelong learning;

(b) public and private partnerships;

(c) fit-for-purpose and compatible national and European structures of educational and VET qualifications, and the promotion of European standards;

(d) modernisation of work, accompanied by safeguarding and improvement of the quality of life including access to formal and non-formal learning both on- and off-the-job;

Crucial questions relate to the availability of the necessary resources and their distribution across private households, companies, education and training providers and public bodies as well as to the most adequate financing mechanisms.

The ten-year framework lends itself to the establishment of clear and precise objectives, even though the shape of Europe ten years ahead appears uncertain in some key respects. Against the background of the scenarios developed for training, the strategies that need to be addressed at the various levels are now becoming clearer for the years to come.

The method that this Cedefop/ETF project has developed can make a contribution to the development of more sustainable and precise strategies, even though the future for Europe still contains a strong measure of uncertainty.

To this end, the European Commission and its partners who work at the European level could make further use of the tools developed in the Cedefop/ETF scenarios project.

8.3. Linking the strategies for training and scenarios at the European level

The second European conference of the project was held in Tallinn in October 2001. This provided the opportunity to review the two phases of the project and to further explore what the project could offer in terms of the development of European strategies and policies ([32]).

The conference provided an opportunity for decision-makers and players involved in education, vocational training and continuing training policies in Europe to review and comment upon the outcomes of the Cedefop/ETF project at European level. The results are intended to help responsible actors and stakeholders to draw their own conclusions. Participants at the Tallinn conference provided valuable perspectives concerning emerging scenarios and strategies, identifying how the findings of this project can be further developed and strengthened so that the scenarios approach can be applied to VET and lifelong learning at the European, national and regional levels.

The conference was part of the process of making the outcomes available and workable among policy-makers and practitioners. It also intended to enable Cedefop, the ETF and the European Commission, and eventually the European Parliament and Council to use the results, where appropriate, to discuss and determine priorities and strategies for planning the next steps towards implementing lifelong learning policies. Creating an improved environment for lifelong learning, which is already underway in some Member States, will also have far-reaching consequences for initial training, which will have to be adapted and reformed. Candidate countries are seeking ways to adapt systems and institutions to meet future needs. The key thesis is that the scenario method could be used as a powerful planning tool that organisations can use in continuously and more especially in circumstances and contexts where key aspects of the future are rather unpredictable or uncertain.

Seeking a comprehensive view of the main driving forces for change over a ten- year perspective, the first day working of the conference focused on an overview of scenarios and strategies as seen by experts in participating countries. The second day concentrated on the European level. Participants paid special attention to the three different European scenarios elaborated by the project: *Europe balancing on the edge; Protective and incremental Europe;* and *Europe ready for sustainable change*. Some of the topics for discussion were complex, and this was the first encounter with the scenarios methodology for many of the policy makers. The discussions were lively. At the conclusion the policy makers, social partner

([32]) Cedefop and ETF published a conference report, see: www.trainingvillage.gr

representatives and the researchers present agreed that it had been a good learning experience. In the words of one participant:

'There is no longer a route map to follow. We need to discover and invent the future together.'.

Among the many issues that participants raised, the following merit careful and special attention:

Quality and access to education, training and lifelong learning is one of the most crucial questions for the future of a unified Europe. Comparative projects like the Cedefop/ETF scenario research create a sense of common understanding, and indicate certain strengths and weaknesses of education and training systems in various countries. Initiatives in recent years have helped us to build a comparative and comprehensive picture that goes beyond the quantitative, to form qualitative and comparative judgements. The Cedefop/ETF project should be regarded as brave attempt to go beyond mere descriptions of the different national contexts.

Scenarios, and also strategies, are substantially dependent on country-specific socio-economic contexts. There are dissimilarities between member and accession countries as well as between EU Member States. Because of this, European strategies cannot be simply an aggregation of national strategies. We need to study the social and regional differences and, at the same time and in parallel, we need to study European-level developments and policies. And both dimensions need to be studied as independent variables.

The role of EU institutions is important in building transparent and flexible qualification structures. It is also important to enable free movement and geographical mobility for participants in education, training and employment between the European countries and beyond ([33]).

All countries stressed the importance of developing basic and transferable skills. However, different countries have contradictory views as to whether the state's responsibility in this sphere should go beyond basic education. It was universally acknowledged that lifelong learning is the most important tool for ensuring the employability, adaptability and better social protection for an individual. A democratic, knowledge-based society cannot be created without enabling access to lifelong learning provision for all members of society during the whole life-span from kindergarten to retirement.

To allow opportunities and access to lifelong learning to become a reality, national education and training systems need to develop more flexible structures that recognise informal forms of education and knowledge, and skills obtained through work and life experience (including leisure time) and activities at all levels.

([33]) See also the report of the High Level Task Force on skills and mobility in the EU made available by the Commission at the end of 2001

It appears that policy makers tend to have only one key strategy in their mind at any one time, and are often working towards a single, unclear and implicit scenario. This illustrates very well how information produced by this project can help decision makers. In some cases, especially in countries with a long and stable development curve, there is a certain tendency to hesitate to elaborate on the future, precisely because society has been stable for a considerable time. In this respect, the younger democracies may have advantages in constructing convincing longer term perspectives and more sustainable innovations.

If enough attention and energy are given to the dissemination of findings, the project's results will have a real impact on the policy decision-making process. Social partners can help to generate change, because thy have it in their power to call public attention to short-sighted decisions. Thus, scenario-planning should be recognised as a process, rather than as a 'once only' project.

Issues such as ageing, ICT-implications ([34]), the growth of distance education, e-learning and government capacity to raise taxes or to offer incentives for training were included in each country's scenario. The question is how to prioritise and operate these diverse aspects in the different specific contexts.

The apparent contradiction between the popularity of some strategies and their robustness is worth noting. In particular, there is lot of talk about flexibility and developing the 'modern worker', but we do not seem very successful in finding the right strategies and tools to achieve this. Highly flexible and adaptable workers may become a reality only when the institutions and provisions responsible for education and training become more responsive.

Use of the scenario method should not be limited to policy formation. It is also a useful learning and training tool, particularly in the setting of the learning organisation and in organising lifelong learning more effectively and efficiently.

Government representatives and social partners addressing the plenary session that concluded the conference expressed the view that the process developed through the project has potential though, needs some adjustment and further development. The partner institutes also made a number of suggestions as to what could be developed differently or better. It was almost unanimously stated that a continuation of the project is worthwhile, both at national and European levels ([35]).

([34]) ICT: information and communication technologies

([35]) See also the Tallinn conference report on Cedefop's homepage: www.trainingvillage.gr

9. A proposal for overarching scenarios and linked strategies for lifelong learning at the European level

Setting the two series of broad scenarios that the European Commission has developed (see section 2 of this report) alongside the scenarios that the Cedefop/ETF research has produced (see section 5), it is possible to build a bridge that brings together all of these and the European policy priorities mentioned in section 7.

The scenarios in the matrix that follows concentrate on the extent of European cooperation and cohesion in social policy arenas (a continuum between competition and cohesion), and the extent to which European 'learning systems' converge or remain divergent. The matrix can be elaborated and refined, and this process began on the second day of the Tallinn conference. To illustrate the model, we have developed the first scenario in a little more detail than the others.

The *Divided Europe* scenario is as follows:

(a) geography - the dividing lines are not necessarily the same as national frontiers. Rather, they divide prosperous and competitive regions and agglomerations from regions that are increasingly lagging behind. *Mezzogiornos* spread, and most countries have their own larger or smaller disadvantaged regions;

(b) sectors (and by size of companies) - some industrial sectors and SMEs operate only at local or regional levels. Some of these are marginalised and lose prosperity and competitiveness within the wider Europe.

(c) target groups - disadvantaged target groups (low-skilled, ethnic minorities, ageing groups and populations in remote regions with poor infrastructures) are put at an increased disadvantage. More impoverishment of larger parts in the population follows. The digital divide goes hand in hand with an increasing social division.

In *Pick and mix Europe* the Member States work towards better socio-economic cohesion, although the systems do not converge very much. Training provisions stay basically different and take little account of the European dimension, cooperation is limited and competition may even be increased. Local and regional concerns, as well as individual ones (enterprises' and participants') are taken on board more efficiently.

In the *Learning Europe* ([36]) scenario European Member states, institutions and stakeholders learn from each other. A culture of learning and working towards the establishment of a renewed and knowledge-based society develops. Europe, as part of the wider world, plays an increasingly important role in shaping or moderating broader, global development. Nonetheless, the cohesion and transparency of countries' internal education and training systems does not necessarily increase.

In *Towards a 'European' education and training system* European social-economic, monetary and cultural integration proceeds at a high speed and apparently successfully. The consequence is that either *de jure* or *de facto* (or both) the education and training systems in Europe become similar and coherent, despite continuing cultural and historical differences between groups of countries alongside a North-South and/or East-West borderline.

We present the matrix for these scenarios at the end of this report. Once the scenarios have been refined and developed through discussion with key players at European level, it will be possible to examine identified strategies using these scenarios as a series of lenses or as alternative backgrounds against which to view the potential of particular strategies or groups of strategies.

It is important that contributors to policy are involved in the identification of strategies for examination and that the 'ownership' of this strategic conversation lies with the policy community, assisted by researchers in the initial stages. The conclusions that the Cedefop/ETF project has reached concerning strategies for VET and lifelong learning (see section 6) can set this discussion in motion, and the developments traced in section 7 provide several of the parameters needed.

Some exploration of the plausibility of the four scenarios is already taking place. This exploration could lead to a follow-up of the Scenario project in 2003, providing that relevant parties at European level see this as having purpose. Such a 'strategic conversation' will help to identify and strengthen lifelong learning policies in the light of European employment strategy and the overall objectives for education and training in the medium and longer term, on which the Council is already focusing.

([36]) See also European Commission, Joint Research Centre, Institute for Prospective Studies (1999): *Knowledge and Learning-towards a Learning Europe*, futures series 14, Sevilla by Gavigan, James P. *et al*

Matrix 4: Overarching scenarios and strategies covering all three contexts (at comparative level)

Socio-economic development // systemic divergence or convergence	Competition rather than cooperation	Socio-economic cohesion
Liberalisation, decentralisation and individualisation	1. Competitiveness and splendid isolation: *Divided Europe* Systemic divergences within and between countries remain and may be growing; education/training systems and providers are competing strongly; increasing polarisation and marginalisation of certain target groups, regions, sectors.	2. Unity in diversity: *Pick and mix Europe* The social and innovative role of education and training is recognised. However, no wider system development is taking place; systems and provisions develop only slowly towards mutual compatibility or transparency.
Increasing convergence and mutual learning	3. Convergence without great coherence: *Learning Europe* Despite prevailing divergences in the economy and society, converging regulations and provision are being developed, though the links to industry and private economy are largely missing. Efforts to ensure compatible rules and procedures at European level contribute little to increasing mobility and innovation. Systems and structures compete, and see European matters as peripheral.	4. Balance and coherence: *Towards a comprehensive European education and training system* The trend towards closer socio-economic cooperation is confirmed through pro-active cooperation between European Member States and pre-accession states in education and training. More people (young and old) gain higher levels of education and training. Resources are available through public and private funds. Systems develop in a comparable way. Qualification structures and educational/ training provisions become increasingly similar and compatible.

10. Summary and conclusions

The findings of the joint Cedefop/ETF scenario project suggest that the following strategies rank high in terms of importance:

(a) the strengthening of the social (and environmental) dimension of VET and lifelong learning in comparison with the economic and competition-policy dimension; combating of polarisation and marginalisation, and ensuring equal opportunities in VET and lifelong learning – making possible access to the highest possible qualifications for all and/or positive discrimination in favour of disadvantaged groups, regions and sectors; development of the institutions responsible for VET and lifelong learning, including cooperation between trade and industry/companies and state authorities, schools and enterprises, etc.; promoting partnerships between public and private educational institutions and between education and VET, and education within and outside schools, particularly at local, regional and sectoral levels;

(b) provision of a transparent structure of educational and VET qualifications and of adequate certification and accreditation systems at sectoral, national and European levels; creating a connection between qualifications obtained in initial and continuing training, and facilitating a common reference framework for different education and (continuing) training paths and contents; promotion of European standards in the development of qualifications and in certification/accreditation modes in certain sectors, and of continuing cooperation in the promotion of innovations, tools and methods for adjusting VET and continuing training provision and qualifications;

(c) (re)organisation and modernisation of work, accompanied by improvements in the quality of work and life; improved integration of learning hours and working hours, facilitating time for education and recognition of experiential/informal learning; increased involvement of the social partners, promotion of flexible wage agreements and forms of working (e.g. job rotation) appropriate to the differing requirements and living and working conditions of employees and the self-employed; making it possible to combine work and learning throughout one's whole working life; this may include modernisation and decentralisation, individualisation and increased flexibility of options and supply structures, accompanied by a strengthening of the 'market' position of participants in VET and lifelong learning; combining improvements in the quality of work and quality of life, for instance through new types of collective agreements and working time/learning time combinations.

The following four areas may provide a focus for the next 10 years:

(a) the social (and environmental) dimension of VET and LLL;

(b) public and private partnerships;

(c) compatible national and European structures of educational and VET qualifications, provision and promotion of European standards;

(d) modernisation of work, accompanied by safeguarding and improvement of quality of life including access to formal and non-formal learning on-the-job and off-the-job, lifelong learning during work and alongside work and employment.

Three major scenarios have been identified at the European level within the joint Cedefop/ETF research project:

(a) *Europe on the edge* - a Europe, where everything is uncertain and major current problems are not resolved, e.g. unemployment, lack of flexibility of training provision and work, economic recession, high labour mobility, low (global) competitiveness and growth, traditional practice in companies, inequality neither increasing nor decreasing;

(b) *Protective and incremental Europe* - tailor-made training programmes, individual training accounts, state not responsible for lifelong learning, unemployment remains a problem, continuing privatisation, small businesses and remote regions have problems, not enough funding possibilities, increasing inequality;

(c) *Sustainable and competitive Europe* - lifelong learning is important, networks between companies or learning organisations and training providers are common, increased needs for foreign workers, reduced and low unemployment, individuals are mainly responsible for their own training, companies have well-developed training programmes which are part of their business plan, new kind of work contracts integrating training (leave), social inequalities remain.

Crucial questions relate to the necessary resources and funds and their distribution across the various levels of intervention and contributors: private households, companies and public bodies, national and/or European Union funds, collective funding arrangements/ agreements ([37]) or solidarity funds, insurance or voucher, learning account systems and the extent of individual (funding) responsibility.

These scenarios will be further refined and European level actors will be consulted. Which scenarios (and linked strategies) will become reality is not clear. Most of those involved in the European level debate appear to favour the third of these, the sustainable Europe scenario ([38]). However, within this scenario the inequality issue is likely to be difficult to resolve ([39]).

The background to the project is as follows:

(a) The European Centre for the development of Vocational Training (Cedefop/Thessaloniki) jointly with the European Training Foundation (ETF/Turin) and in cooperation with the Estonian Ministry for Education organised a major European Conference in Tallinn. The

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([37]) on sectorial, regional or company levels

([38]) At the time, the NY attack had not taken place.

([39]) Social inequalities do not primarily depend on vocational education and training policies, even if they may contribute to combatting or increasing those inequalities.

conference discussed and commented upon the outcomes of the scenario project on the future of VET and lifelong learning; ([40])

(b) More than 70 participants from 20 European countries discussed the usefulness and potential follow-up of the joint Cedefop/ETF project, which was launched in early 1999, implemented in two phases in 1999/2000 and 2001 and has now arrived at its final conclusions and recommendations;

(c) Five EU-countries and five central and eastern European countries ([41]) participated in this work, which is intended to assist policy makers and practitioners in education and training to better define medium and longer term strategies for education, training and learning policies in a ten-year perspective. Major trends for three contexts (economy and technology, societal and employment issues, and skills, knowledge and training) were analysed by stakeholders in these countries in the light of their importance and likelihood. The researchers developed country specific and European level scenarios and strategies and these are documented in respective reports ([42]).

The scenarios use a ten-year framework to identify likely trends and variables whose outcome is uncertain. This way, policy makers can handle uncertainties about the future and are not forced to rely on predictions whose validity is in doubt from the very start. As a continuing process this lends itself to the establishment of clear and precise objectives. Against the background of the scenarios developed, the strategies that need to be addressed at the various levels have now been more clearly defined. However, these strategies need further analysis, refinement and weighting with respect to the different most plausible scenarios. The bodies and actors responsible for implementing these actions, measures and strategies also have yet to be determined, and the necessary tools, instruments and methods (including democratic procedures) have to be selected – here, systemic and institutional reforms are extremely important.

To this end, further and more intensive use could be made of the scenario/strategy-method by bringing together the players, politicians, social partners and practitioners into a strategic conversation. This could contribute to the decision-making process on a consensual, lasting and pro-active basis to the restructuring of funding, and the selection of indicators and

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([40]) A conference report is available in Cedefop's homepage.

([41]) Austria, Belgium/Luxemburg, Czech Republic, Estonia, Germany, Greece, Hungary, Poland, Slovenia and the United Kingdom

([42]) See the reports made available in the respective window concerning the scenario project in Cedefop's homepage www.trainingvillage.gr

benchmarks for the implementation of the rolling agenda of the Council's Education Committee, to the Commission's intention for actions to be launched on lifelong learning, and to full implementation of the current and future European employment strategy. Conflicting starting positions are not necessarily an obstacle to progress, and may even be needed, to achieve sound and lasting agreements on strategy development in the field of European education, training and lifelong learning policies.

Annex: List of reports and documents [43]

Phase 1

Ant, Marc. *Report on Luxembourg and Belgium*. Luxembourg: Etudes et Formation, 1999.

Blumberger, Walter. *Austrian national report*. Linz: IBE, 1999.

Csáko, Mihály et al. *Final report on Cedefop's scenario project in Hungary*. Budapest: Institute of Sociology and Social Policy, Eötvös Loránd University (ELTE), 1999.

Dimoulas, Kostas; Palaiologos, Nikos; Papadogamvros, Vassilis. *Scenario project Greek: final report*. Athens: INE GSEE/ADEDI, 1999.

Grollmann, Philipp; Rauner, Felix. *Scenarios and strategies for VET in Europe: German report on the first project phase*. Bremen: Institut für Technik und Bildung, Universität Bremen, 1999.

Ignjatović, Miroljub; et al. *Scenarios and strategies for VET in Europe: national report: Slovenia*. Ljubljana: University of Ljubljana, 1999.

Kozek, Tadeusz. *Analysis of scenarios and strategies for VET in Poland*. Warsaw: Task Force for Training/Human Resources Cooperation Fund, 1999.

Kubátová, Helena; Opočenský, Karel; Berný, Libor. *National report on the project scenario: international comparative research of VET scenarios and strategies in Europe: Czech Republic*. Praha: VÚOŠ, 1999.

Leney, Tom; Wolf, Alison; Coles, Mike. *scenarios and strategies for vocational education and training in Europe: the UK report*. London: Institute of Education, University of London/Qualifications and Curriculum Authority (QCA), 1999.

Loogma, Krista; Tiina Annus. *Scenarios and strategies for VET in Europe (first stage): evaluation of trends and strategies of VET by Estonian experts*. Tallinn: Estonia Education Forum, Technical University of Tallinn, 1999.

Sellin, Burkart; van Wieringen, Fons; Dekker, Helga; Tessaring, Manfred; Fetsi, Anastasia. *Scenarios and strategies for vocational education and training in Europe: European synthesis report on phase I. (Max Goote Rapport)*. Amsterdam: Max Goote Institute, 2000.

([43]) These documents can be seen and downloaded from the scenario window within the interactive homepage of Cedefop (www.trainingvillage.gr).

Phase 2

Bedin, Jimmy. *Scenarios and strategies for vocational education and training in Luxembourg and Belgium.* Luxembourg: Etudes et Formation, 2001.

Blumberger, Walter. *Scenarios and strategies for vocational education and training in Austria.* Linz: IBE, 2001.

Dimoulas, Kostas; Papadogamvros, Vassilis. *Scenarios and strategies for vocational education and training in Greece.* Athens: INE GSEE/ADEDI, 2001.

Grollmann, Philipp; Kruse, Wilfried; Rauner, Felix. *Scenarios and strategies for vocational education and training in Germany*, Bremen/Dortmund: ITB/SFS, 2001.

Ignjatović, Miroljub; Svetlik, Ivan; Trbanc, Martina. *Scenarios and strategies for vocational education and training in Slovenia.* Ljubljana: University of Ljubljana, Faculty of Social Sciences, 2001.

Kozek, Tadeusz; Piwowarski, Rafael. *Scenarios and strategies for vocational education and training in Poland.* Warsaw: Task Force for Training and Human Resources Cooperation Fund, 2001.

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Cedefop (European Centre for the Development of Vocational Training)

Scenarios and strategies for vocational education and lifelong learning in Europe: Summary of findings and conclusions of the joint Cedefop/ETF project (1998 - 2002)

Burkart Sellin

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The joint Cedefop/ETF research project has developed the scenario methodology and applied it to the fields of vocational training and lifelong learning. Projecting current trends into the future frequently produces contradictory or divergent results. Strategy development for education and training systems often involves a considerable degree of uncertainty about the future in the context of unprecedented global, economic, socio-cultural and technological change. The scenario method works within this grain of uncertainty. It can be applied at local, national, European and international level.

The project involved a partnership of research institutes from ten countries, five from the EU and five from central and eastern Europe. The scientific and technical coordination was performed by the Max Goote Expert Centre at Amsterdam University. The survey helped to understand the vocational training systems in the linked contexts of economic and technological change, changes in society, work and the labour market and in the changing training/skills environment.

Scenarios were developed for a time ten years hence. They built in an analysis of trends and uncertainties as well as of their importance and likelihood of occurrence. The purpose was to draw the attention of actors and stakeholders to strategically important factors for the future shaping of training and lifelong learning, whether on a national or European decision-making level. This report sets out project findings in a broader context. We hope that it will contribute to the task of promoting relevant and sustainable policies for VET and lifelong learning.

The content of the brochure is being published for as wide distribution as possible. A full report on all details of the second phase will be made available by Cedefop and ETF later in 2002. The report on phase 1, national reports on both phases and conference reports can be consulted and downloaded via the respective window of Cedefop's website: www.trainingvillage.gr.

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Summary of findings and conclusions of the joint Cedefop/ETF project (1998 - 2002)

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CEDEFOP

European Centre for the
Development of Vocational Training

Europe 123, GR-570 01 Thessaloniki (Pylea)
Postal address: PO Box 22427, GR-551 02 Thessaloniki
Tel. (30) 310 490 111, Fax (30) 310 490 020
E-mail: info@cedefop.eu.int
Homepage: www.cedefop.eu.int
Interactive website: www.trainingvillage.gr

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